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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant : Akiko ITAI et al.

Group Unit : 2176

Serial No : 10/551,549
(National Stage of PCT/JP2004/004704)

Examiner : not yet assigned

I.A. Filed : March 31, 2004

For : METHOD OF DISPLAYING MOLECULE FUNCTION
NETWORK

INFORMATION DISCLOSURE STATEMENT

Commissioner of Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop AMENDMENT
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

In accordance with the duty of disclosure under 37 C.F.R. 1.56, 1.97, and 1.98, Applicants hereby bring the following information to the attention of the Examiner, which includes information cited and discussed in the specification, the International Search Report, the Written Opinion, and the International Preliminary Examination Report on Patentability issued in connection with counterpart International Application No. PCT/JP2004/004704, of which the present application is the U.S. National Stage. Copies of the International Search Report (in English and Japanese) and the Written Opinion (in Japanese) were enclosed with the papers when entering the National Stage on September 30, 2005, and a copy of the International Preliminary Examination Report on Patentability (in English) is enclosed herewith. The Examiner is invited to review

these materials to inspect the relevance indicated during international examination with respect to the documents cited therein.

- (1) H. FUKAGAWA et al., The Tissue Culture Engineering, Vol.27, No.2, 2001, pp. 68-71;
- (2) WO 02/23395 A1 and its family member U.S. Application No. 10/363,689, which published as U.S. Patent Application Publication No. 2004/0024772 A1 to ITAI on February 5, 2004; Applicants note that WO 02/023395 is also discussed in the present application with reference to its International Application No. PCT/JP01/07830, beginning at page 2, line 9;
- (3) Y. SHIBAGAKI et al., Proceedings of the Annual Conference of JSAI, July 3, 2000, pp. 543-544, accompanied by an English language translation;
- (4) H. FUKAGAWA et al., Dai 18 Kai Bio Technology Symposium Yokoshu, September 28, 2000, pp. 18-21;
- (5) H. FUKAGAWA et al., Dai 18 Kai Bio Technology Symposium Yokoshu, September 28, 2000, pp.101-104; and
- (6) JP2002-091991 A, published March 29, 2002, accompanied by an English language Abstract.
- (7) WO 03/077159 A1 and its family member U.S. Application No. 10/506,610, which published as U.S. Patent Application Publication No. 2006/0004706 A1 to TOMIOKA et al. on January 5, 2006; Applicants note that this document is discussed in the present application with reference to its International Application No. PCT/JP03/02847, beginning at page 2, line 10.

Furthermore, Applicants direct the Examiner's attention to the following documents made of record in U.S. Application Nos. 10/506,610 and 10/363,689:

- (8) WU et al., "The Protein Information Resource: an integrated public resource of functional annotation of proteins," Nucleic Acids Research, Vol. 30, No. 1, pp. 35-37 (2002);
- (9) KANEHISA et al., "The KEGG databases at GenomeNet," Nucleic Acids Research, Vol. 30, No. 1, pp. 42-46 (2002);
- (10) XENARIOS et al., "DIP, the Database of Interacting Proteins: a research tool for studying cellular networks of protein interactions," Nucleic Acids Research, Vol. 30, No. 1, pp. 303-305 (2002);
- (11) MELLOR et al., "Predictome: a database of putative functional links between proteins," Nucleic Acids Research, Vol. 30, No. 1, pp. 303-305 (2002);
- (12) EP 1 008 572, published June 14, 2000;
- (13) KANEHISA, "Toward Pathway Engineering: A New Database of Genetic and Molecular Pathways," Science & Technology Japan, No. 59, pp. 34-39 (1996);
- (14) TAKAI-IGARASHI et al., "A Pathway Finding System for the Cell Signaling Networks Database," In Silico Biology, Vol. 1, pp. 129-146 (1999);
- (15) HISHIGAKI, "Interaction-Based Analysis of Protein Function and Network," Genome Informatics, Vol. 10, pp. 257-258 (1999);
- (16) KANEHISA, "Pathway databases and higher order function," Advances in Protein Chemistry (Received at JICST), No. 51, pp. 381-408 (2000);

- (17) WO 00/48092, published August 17, 2000, and its family members U.S. Patent No. 6,745,204 to HOGUE et al., issued June 1, 2004, and U.S. Patent Application Publication No. 2002/0072865 to HOGUE et al., published June 13, 2002;
- (18) Taiwanese Patent No. 331612, published May 11, 1998, accompanied by an English translation thereof;
- (19) S. GOTO et al., "Organizing and Computing Metabolic Pathway Data in Terms of Binary Relations", Pacific Symposium on Biocomputing, (2nd), Maui, pp. 175-186 (1996);
- (20) HIRAYAMA, "Bunshi Sekkei no tamenno Chishiki Data System no Koujika-hou no Kaihatsu; Lead Kagoubutsu Hakken no tamenno Keiken-soku no Riron-ka ni kansuru Kenkyuu," Seitai Seigyo Busshitsu no Bunshi Sekkei to Seimitsu Gousei no tamenno Kiban Gijutsu no Kaihatsu ni kansuru Kenkyuu (1st period) Seika Houkokusho, 1993-1995 ed., 1996, pp. 210-221, together with an English language translation of the same;
- (21) OKUBO et al., "Rensai Genome Data Base Keisan-ki ni Kakunou sareta Seimei no Sugata; Dai 6kai, Hatsugen Joho Database to Clustering; Idenshi no Furumai no Hyougen to sore ni motozuku Idenshi no Bunrui," bit, December 1, 1999, Vol. 399, pp. 80-86, together with a partial English language translation of the same;
- (22) NAKA, "Genome Kinou Kenkyuu Protocol Micro Array, PCR, Bio-informatics no Saishin Gijutsu kara SNP, Model Seibutsu no Kaiseki made; Chapter 3, Hito Genome Bio-informatics; 1. Genome Informatics," Jikken Igaku separate volume, Post Genome Jidai no Jikken Kouza 1, April 10,

2000, pp. 163-167, together with a partial English language translation of the same;

(23) AHO et al., "Data Structures and Algorithms," Data Structures and Algorithms, pp. 198-202 (1983).

In accordance with 37 C.F.R 1.98 and the waiver thereto, copies of U.S. Patents, U.S. published patent applications, and U.S. patent applications are not enclosed herewith. However, if any copies are needed, the Examiner is respectfully requested to contact the undersigned.

Copies of the above-noted documents, except for document (5) and U.S. Patents, U.S. published patent applications, and U.S. patent applications, are enclosed together with a duly completed Form PTO-1449. A copy of Document (5) is not readily available to the undersigned. However, since this document is cited in the International Search Report, a copy should be in the file at the U.S. Patent and Trademark Office. Should the Examiner need a copy of document (5), the Examiner is respectfully asked to contact the undersigned.

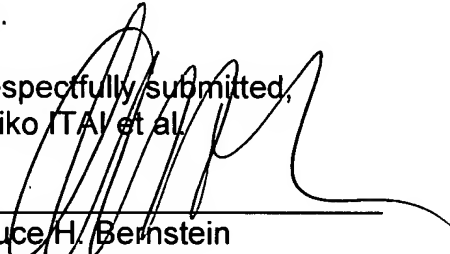
The Examiner is accordingly requested to consider each of these documents, and to make them of record in this application by initialing in the appropriate spaces on the Form PTO-1449. Applicants respectfully requests that the Examiner include a copy of the initialed Form PTO-1449 with the next communication from the U.S. Patent and Trademark Office.

Applicants note that while this Supplemental Information Disclosure Statement is being filed more than three months from the filing date, Applicants have not received an action on the merits from the U.S. Patent and Trademark Office. Accordingly, consideration of the enclosed document is required under 37 C.F.R. 1.97(b)(3).

However, if an action on the merits has been mailed prior to the filing date of this Supplemental Information Disclosure Statement, Applicant hereby authorizes the charging of any required fees necessary for consideration of the documents cited herein to Deposit Account No. 19-0089.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
Akiko ITA et al.



Bruce H. Bernstein
Reg. No. 29,027

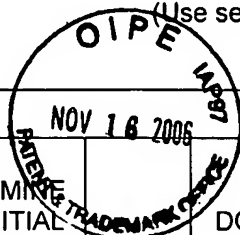
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Arnold Turk
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FORM PTO-1449

U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket No.
P25061Application No.
10/551,549INFORMATION DISCLOSURE STATEMENT
BY APPLICANT

(Use several sheets if necessary)

Applicant
Akiko ITAI et al.Filing Date
March 31, 2004Group
2176

U.S. PATENT DOCUMENTS

EXAMINER R INITIAL	DOCUMENT NUMBER	DATE	NAME	CLAS S	SUBCLAS S	FILING DATE IF APPROPRIATE
	2004 0 0 2 4 7 7 2	02/05/04	ITAI			
	2006 0 0 0 4 7 0 6	01/05/06	TOMIOKA et al.			
	2002 0 0 7 2 8 6 5	06/13/02	HOGUE et al.			
	6 7 4 5 2 0 4	06/01/04	HOGUE et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
02	/ 2 3 3 9 5	03/21/02	W.I.P.O			
2002	- 0 9 1 9 9 1	03/29/02	JAPAN			
03	/ 0 7 7 1 5 9	09/18/03	W.I.P.O			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1	H. FUKAGAWA et al., The Tissue Culture Engineering, Vol.27, No.2, 2001, pp. 68-71.
2	Y. SHIBAGAKI et al., Proceedings of the Annual Conference of JSAI, July 3, 2000, pp. 543-544, accompanied by an English language translation.
3	H. FUKAGAWA et al., Dai 18 Kai Bio Technology Symposium Yokoshu, September 28, 2000, pp. 18-21.
4	H. FUKAGAWA et al.; Dai 18 Kai Bio Technology Symposium Yokoshu, September 28, 2000, pp.101-104.
5	English language Abstract of JP 2002-091991.
6	Application No. 10/363,689, filed September 10, 2001 and entitled "METHOD OF FORMING MOLECULAR FUNCTION NETWORK", which was published as U.S. 2004/0024772 on February 5, 2004.
7	Application No. 10/506,610, filed March 11, 2003 and entitled "METHOD OF GENERATING MOLECULE FUNCTION NETWORK", which was published as U.S. 2006/0004706 on January 5, 2006.
8	English Language Abstract of WO 02/23395.
9	English Language Abstract of WO 03/077159.
10	WU et al., entitled "The Protein Information Resource: an integrated public resource of functional annotation of proteins," Nucleic Acids Research, Vol. 30, No. 1, pp. 35-37 (2002).
11	KANEHISA et al., entitled "The KEGG databases at GenomeNet," Nucleic Acids Research, Vol. 30, No. 1, pp. 42-46 (2002).
12	XENARIOS et al., entitled "DIP, the Database of Interacting Proteins: a research tool for studying cellular networks of protein interactions," Nucleic Acids Research, Vol. 30, No. 1, pp. 303-305 (2002).

EXAMINER

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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

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Patent and Trademark OfficeAtty. Docket No.
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(Use several sheets if necessary)Applicant
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASSES	SUBCLASSES	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	3 3 1 6 1 2	05/11/98	TAIWAN			X
00	/ 4 8 0 9 2	08/17/00	W.I.P.O.			
	1 0 0 8 5 7 2	06/14/00	E.P.O.			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

13	MELLOR et al., entitled "Predictome: a database of putative functional links between proteins," Nucleic Acids Research, Vol. 30, No. 1, pp. 303-305 (2002).
14	KANEHISA, entitled "Toward Pathway Engineering: A New Database of Genetic and Molecular Pathways," Science & Technology Japan, No. 59, pp. 34-39 (1996).
15	TAKAI-IGARASHI et al., entitled "A Pathway Finding System for the Cell Signaling Networks Database," In Silico Biology, Vol.1, pp. 129-146 (1999).
16	HISHIGAKI, entitled "Interaction-Based Analysis of Protein Function and Network," Genome Informatics, Vol. 10, pp. 257-258 (1999).
17	KANEHISA, entitled "Pathway databases and higher order function," Advances in Protein Chemistry (Received at JICST), No. 51, pp. 381-408 (2000).
18	S. GOTO et al., "Organizing and Computing Metabolic Pathway Data in Terms of Binary Relations", Pacific Symposium on Biocomputing, (2nd), Maui, pp. 175-186 (1996).
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20	OKUBO et al., "Rensai Genome Data Base Keisan-ki ni Kakunou sareta Seimei no Sugata; Dai 6kai, Hatsugen Joho Database to Clustering; Idenshi no Furumai no Hyougen to sore ni motozuku Idenshi no Bunrui," bit, December 1, 1999, Vol. 399, pp. 80-86, together with a partial English language translation of the same.
21	NAKA, "Genome Kinou Kenkyuu Protocol Micro Array, PCR, Bio-informatics no Saishin Gijutsu kara SNP, Model Seibutsu no Kaiseki made; Chapter 3, Hito Genome Bio-informatics; 1. Genome Informatics," Jikken Igaku separate volume, Post Genome Jidai no Jikken Kouza 1, April 10, 2000, pp. 163-167, together with a partial English language translation of the same.
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